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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,291	10/06/2004	Yukihiro Tanizoe	MTS-3529US	6477
23122 7590 03/12/2007 RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			EXAMINER MEYERS, JAMES A	
			ART UNIT	PAPER NUMBER
			2609	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/12/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/510,291

Applicant(s)

TANIZOE ET AL.

Examiner

James A. Meyers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/6/2004, 11/14/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the initial filing and preliminary amendment both filed October 6, 2004. Claims 1-13 as in the preliminary amendment are pending and have been considered below.

Claim Objections

1. Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The medium of Claim 13 performs only the program of Claim 12, and thus fails to further limit the parent claim.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 12 is drawn to a computer program per se. A computer program is not a series of steps or acts and thus is not a process. A computer program is not a physical article or object and as such is not a machine or manufacture. A computer program is not a combination of substances and therefore

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not a compilation of matter. Thus, a computer program by itself does not fall within any of the four categories of invention. Therefore, Claim 12 is not statutory.

Claim Rejections - 35 USC § 102

3. Examiners Note: Applicant has successfully invoked 35 USC 112 6th paragraph by using "mean-plus-function" language in Claims 1 and 10. "Means of performing image capture" will be examined as an image capturing element (page 16, line 11). "Means of performing color change detection" will be examined as a color change detecting part (page 16, line 12). "Means of performing luminance change detection" will be examined as a luminance change detecting part (page 21, line 15). "Means of performing luminance signal generation" will be examined as least an adder and a core processing part (page 16, lines 14-16).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2 and 7-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Osada (JP 2000-197067).

Claim 1: Osada discloses an image signal processing apparatus (Abstract) comprising:

(a) an image capturing element with at least 2 types of color filters arranged based on a repetition of a pattern determined in advance (a color filter CF of a Bayer pattern; Abstract);

(b) a color change detecting part regarding the result of the image capture (page 8, paragraphs 33-34; Figure 3);

(c) a luminance change detecting part regarding the result of the image capture (page 8, paragraphs 33-34; page 9, paragraph 46); and

(d) a luminance signal generator regarding the result of the image capture based on the result of the color change detection and the luminance change detection (Abstract).

Claim 2: Osada discloses an image signal processing apparatus as in Claim 1 above and further discloses that the color change detection is performed with respect to a predetermined direction corresponding to the pattern (page 9, paragraph 44; page 10, paragraph 53; Figures 16 and 17), and that the luminance signal is generated such that a psuedo-signal is suppressed at a color change point where the detected color change exceeds a predetermined level (Abstract; page 17, paragraph 127).

Claim 7: Osada discloses an image signal processing apparatus as in Claim 2 above and further discloses that the pattern is a pattern having two pixels in the horizontal direction and two pixels in the vertical direction so as to arrange a color filter of red and a color filter of green in this order on the first line in the horizontal direction and a color

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filter of green and a color filter of blue in this order on a second line in the horizontal direction (Figure 2) and that the predetermined direction is the direction of a diagonal line (Figure 16).

Claim 8: Osada discloses an image signal processing apparatus as in Claim 7 above and further discloses that the color change detection is performed for a change of red in the direction of the diagonal line and a change of blue in the direction of the diagonal line (Figure 16).

Claim 9: Osada discloses an image signal processing apparatus as in Claim 7 above and further discloses that calculation of suppression of the psuedo-signal is performed for a change of red in the direction of the diagonal line and a change of blue in the direction of the diagonal line (Abstract; page 17, paragraph 127; Figure 16).

Claims 10-13: Osada discloses an image signal processing circuit, method, program and medium comprising:

(a) a color change detecting part regarding the result of the image capture (page 8, paragraphs 33-34; Figure 3);

(b) a luminance change detecting part regarding the result of the image capture (page 8, paragraphs 33-34; page 9, paragraph 46); and

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(c) a luminance signal generator regarding the result of the image capture based on the result of the color change detection and the luminance change detection (Abstract).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osada (JP 2000-197067) in view of Tanizoe et al. (JP 08-070466).

Claim 3: Osada discloses an image signal processing apparatus as in Claim 2 above, and further discloses that the predetermined direction is the horizontal direction (Figure 17). However, Osada does not explicitly disclose that the pattern is a pattern having two pixels in the horizontal direction and four pixels in the vertical direction so as to arrange a color filter of magenta and a color filter of green in this order on a first line in the horizontal direction, a color filter of yellow and a color filter of cyan in this order on a second line in the horizontal direction, a color filter of green and a color filter of magenta in this order on a third line in the horizontal direction and a color filter of yellow and a color filter of cyan in this order on a fourth line in the horizontal direction (referred to hereafter as a color difference line sequential arrangement, see page 2, line 7 of the

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present application). Tanizoe discloses an image signal processing device that uses this color difference line sequential arrangement (Page 4, Figure 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to incorporate the arrangement of Tanizoe into the apparatus of Osada. One would have been motivated to include the arrangement of filters of Tanizoe to allow for detection of color changes that would be less apparent using an R-G-B arrangement.

Claims 4-6: Osada and Tanizoe disclose an apparatus as in Claim 3 above, and Osada further discloses that color detection change can be performed horizontally and vertically (Figure 17). Neither Osada nor Tanizoe disclose that the colors magenta, yellow and cyan are used in color change detection. However, it would have been obvious to one having ordinary skill in the art at the time of invention that any colors included in the pattern of filters, including red, blue, green, magenta, cyan and yellow could be used to detect color change horizontally, vertically or diagonally. One would have been motivated to use magenta, green, yellow and cyan to detect the color change because those were the colors present in the filter disclosed in Tanizoe.

Conclusion

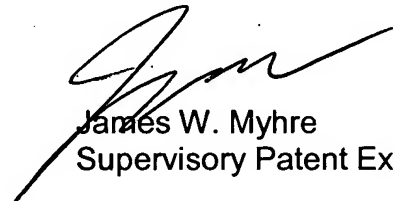
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Meyers whose telephone number is 571-270-1690. The examiner can normally be reached on Mon-Fri (Alternate Fridays Off), 7:00 AM - 4:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Myhre can be reached on 571-272-6722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2/28/2007
JM



James W. Myhre
Supervisory Patent Examiner